

# Measuring Missouri's Public Health Preparedness Success

## 2008 Update



Missouri Department of Health and Senior Services  
November 2008



*The Missouri Department of Health and Senior Services  
has experienced great success during the  
past grant year (August 31, 2007 to August 9, 2008)  
and has made significant advances in preparing  
Missouri for a public health emergency.*

***Measuring Missouri's Public Health Preparedness Success***  
*outlines the key accomplishments  
of the department's progress in strengthening Missouri's  
public health preparedness capacity, highlights the  
successes, and describes how funding was spent on  
public health, hospital, and laboratory preparedness.*

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**The  
Department  
Situation  
Room is  
staffed by a  
duty officer  
24 hours  
a day, 7 days  
a week, and  
monitors the  
day-to-day  
public health  
emergency  
preparedness  
of the state.**

## Department Situation Room

The Department Situation Room (DSR) is staffed by a duty officer 24 hours a day, 7 days a week, and monitors the day-to-day emergency preparedness of the state. A toll-free number (800-392-0272) is available around-the-clock for emergencies, disease reporting, and addressing concerns from the general public. The DSR serves as a command center during emergencies. Six teams of Department of Health and Senior Services' (DHSS) professionals are trained and ready to respond to the DSR and the State Emergency Operations Center (SEOC) immediately.

The web-based EMSysystem is a hospital-tracking resource used to detect possible outbreaks and mass casualty incidents by monitoring Missouri hospitals' emergency departments and provides a channel for instant messages and health and amber alerts. The system is also used as a tool to address a regulatory requirement to report emergency room diversions of more than eight hours to the department. The DSR also watches for unusual activity in the emergency departments, making contact with hospitals to determine the cause.

Missouri Emergency Resource and Information System (MERIS) is a statewide event tracking database used during emergencies and planned events for incident reporting and tracking, resource management, shelter tracking, alert notification and general information sharing. E-Team is a primary component of MERIS and allows participating agencies to access, collaborate and share resources such as GIS mapping, facility and personnel reporting and action planning.

Callaway Nuclear Sentry System is monitored for system concerns/failures and reports serious alerts to the State Emergency Management Agency.

Missouri Uniform Law Enforcement System (MULES) is a highly confidential alert/reporting system notifying law enforcement agencies statewide of suspected criminal activity. The DSR is a receiving agency only and duty officers monitor for terrorist and public health impacted activities.

A Departmental Response Management System (DRMS) email account is monitored for CDC alerts, amber alerts, and other sensitive correspondence. DHSS health alerts, advisories, updates, and guidances are also emailed from this address.

The Emergency Notification System (ENS) provides an automated message to identified public health personnel advising them of an emergency event and action required. The ENS places up to 24 calls at one time, running through cell, work, home, and pager numbers until the individual responds. A report is generated immediately identifying the individuals' responses to the call so the DSR can determine who is available to respond to an event.

The department is prepared to quickly expand its hotline capabilities by 22 additional lines, with trained DHSS staff and nurses available through a 24 hours a day, 7 days a week call-down list. In addition, DHSS staff operating the 14 elderly information lines will field calls.

Fifteen satellite phones are strategically placed around the state in case landlines and cell towers are inoperable. Three satellite phones have data-line capabilities to allow the transfer of data. The DSR and key DHSS staff also have Government Emergency Telecommunications Service (GETS) and Wireless Priority Services (WPS) communication capabilities that allow priority service of land lines and cell phones.

A self-sustaining, mobile command center with seven workstations and a conference area is ready for deployment at all times. It is stocked with basic operating supplies and equipped with wireless communication equipment, laptop computers, plotter to print GIS (Geographic Information Systems) maps, satellite phones, video conferencing equipment, copier/printer/scanner combination, GPS (Global Positioning System), etc. This mobile unit is available for deployment to a specific site or will be used if the DSR is inoperable. The department also purchased essential equipment and supplies needed to handle public information operations off-site.

### Fast Fact

**During 2008, the Department Situation Room received over 3,500 calls.**

Geographical Information Systems (GIS) is an integral part of the emergency response process that includes planning, mitigation, response, and recovery. GIS provides support in the DSR and/or mobile command center during an emergency by inputting information about the event and quickly transforming it into an easily viewed map or graph. Information is updated as the situation changes and customized maps are created. GIS can be used to assist with operations such as locating disease outbreaks, tracking contagions, and determining at-risk populations. Using the Internet, the collected data can be made available to emergency managers statewide.

## Missouri TeleHealth Network

The Missouri Telehealth Network digitally links Missouri hospitals, community health centers, public health agencies, and the Centers for Disease Control and Prevention (CDC) together via an interactive videoconferencing network. This network supports the delivery of disaster preparedness communications and educational programming. Six trainings per year are conducted by DHSS staff on emergency preparedness issues to telehealth program participants.

In addition, the system is used as a mechanism to remotely provide clinical services during disasters. DHSS, in collaboration with the University of Missouri, has provided equipment and maintenance fees for this system to 35 hospitals, 27 federally qualified health centers, Missouri Primary Care Association and Missouri Hospital Association. Data collected revealed that utilization of the telehealth system saved Missourians significant travel time and dollars. In FY 2008, nearly 3,000 round trips from rural areas of Missouri to specialist's clinics in Columbia and Kirksville were avoided resulting in a savings of over 575,000 travel miles and fuel costs of over \$300,000. The average savings per trip was \$116.

## Medical Consultants

DHSS employs a full-time physician who provides medical consultation to the Center for Emergency Response and Terrorism (CERT), as well as to other DHSS staff who are involved in emergency response planning and preparedness. This individual is also available to provide information and education on emergency response and terrorism issues to local public health agency personnel and medical professionals.

The CERT medical consultant works closely with the DHSS' Strategic National Stockpile (SNS) program. Together with other physicians and pharmacists, the medical consultant has helped develop protocols, health assessment forms, and patient information materials to be used if mass antibiotic prophylaxis and utilizing drugs from the SNS becomes necessary following a bioterrorism attack or public health emergency. The medical consultant also participates in planning for the use of antiviral drugs and vaccines during an influenza pandemic.

The medical consultant is closely involved in the development of Health Alerts, Advisories, and Updates, which provide physicians, hospitals, and public health professionals with timely information and guidance concerning situations of public health significance, such as infectious disease outbreaks. During this period, 11 Health Alerts, Advisories, or Updates were issued.

In addition, a medical consultant located with the Division of Community and Public Health, Office of Epidemiology provides high level medical and epidemiological consultations to epidemiology specialists, physicians, and institutions across the state, as well as throughout DHSS. The Medical Consultant is actively involved in the important issues of emergency preparedness, such as alternative standards of care, earthquake preparedness, burn care, and pediatric emergency preparedness.

## State Public Health Laboratory

The Missouri State Public Health Laboratory (MSPHL) continues to serve as Missouri's Laboratory Response Network (LRN) laboratory. The MSPHL maintains the appropriate instrumentation, reagents, and trained staff to perform CDC validated rapid assays using polymerase chain reaction and time-resolved fluorescence, as well as the capability to perform various LRN chemical methodologies using gas chromatography/mass spectrometry and liquid chromatography/tandem mass spectrometry. The MSPHL is a member of PulseNet, a national outbreak tracking system operated by CDC. In addition, the MSPHL tests samples from the an early detection system on a daily basis and is the confirmatory laboratory for positive samples from the U.S. Postal Service's BioDetection Systems that are in place throughout Missouri. The MSPHL has further enhanced emergency capabilities in the areas of food and radiological testing by participating in various other laboratory emergency networks, such as the Food Emergency Response Network and RadNet, an Environmental Protection Agency radiological monitoring network.

The MSPHL maintains an intra-state courier service that provides pick-up of specimens with access to all Missouri counties to ensure delivery to the state laboratory on a daily basis and is available for emergencies 24 hours a day, 7 days a week, 365 days a year.

In 2008, the MSPHL has developed new methodology for the analysis of volatile organic compounds in blood and Ricinine/Abrine in urine. Laboratory radiological response has been upgraded and investigation into the plausibility of expansion into human radiological analysis continues. The MSPHL has incorporated new technologies in fast real-time polymerase chain reaction to ensure a more rapid laboratory response to outbreaks in the food supply. Food testing laboratory preparedness plays a key role in the early detection of outbreaks.

**The State  
Public Health  
Laboratory provides  
a wide range of  
diagnostic,  
biological,  
radiological and  
chemical testing  
available 365 days  
a year to protect  
the public's health.**

The MSPHL conducted six specimen packaging and shipping training courses that reached the main regions of the state in 2008. This train-the-trainer course is designed to inform and prepare sentinel laboratories and other stakeholders on the subject of proper specimen collection, packaging and shipping of routine and emergency specimens to the MSPHL so that rapid and accurate testing results are ensured. The MSPHL continually tests and validates these emergency laboratory response plans by participating in various exercises throughout the year with partner entities.

## Division of Community and Public Health

The Division of Community and Public Health (DCPH) has statewide responsibilities, in cooperation with local public health agencies (LPHAs), to prepare for and respond to public health threats to food and private water supplies, and from infectious diseases including zoonotic threats and radiological or chemical events whether natural, deliberate, or accidental. DCPH has mission-critical functions in emergency response in the areas of surveillance, disease investigation, and environmental public health. Staff in these program areas collaborate with CERT to support the departmental functions of emergency response.

Rapid response teams of state and local disease control specialists and environmental health specialists are located around the state and have responded to a number of bioterrorist threats, including “white powder” (anthrax) incidents, ricin poisoning threats, food tampering incidents, smallpox scares, a BioWatch incident, avian influenza hoaxes and other similar threats and incidents. These individuals are invaluable in providing environmental health and epidemiological capacity and expertise during a number of high-profile events, including the response to hurricanes Katrina and Rita, presidential and vice-presidential debates, World Series, ice storms, power outages, tornadoes, the monkeypox response and the threat of other emerging exotic infectious and zoonotic diseases. Perhaps even more importantly, these epidemiologists maintain their skills and enhance the broader public health system that provides daily protection and disease control interventions for all Missourians. The rapid response teams have successfully responded to a large-scale norovirus outbreak on a Mississippi riverboat, a multi-county shigellosis outbreak in the Kansas City area, and a cryptosporidiosis (with nearly 70 confirmed cases) outbreak in Madison County, in addition to daily investigations and interventions. These daily activities are essential as any outbreak or even a single case of a disease could signal the beginning of a large-scale incident or terrorist attack.

To further detect and analyze events of public health importance and maintain good information flow during the event in order to guide public health interventions and the actions of the epidemiologists, DHSS has also enhanced surveillance programs through the Public Health Emergency Preparedness grants. The Public Health Event Detection and Assessment Unit (PHEDA) in DCPH manages the BioTerrorism Surveillance (BTS) and ESSENCE surveillance systems to provide for early event detection.

In Missouri, hospitals that meet certain criteria are required to send data for each emergency department visit electronically to DHSS for the purpose of using those data to look for trends in broad disease categories (e.g., respiratory, gastrointestinal), also called syndromes.

**Critical functions provided through the Division of Community and Public Health, such as surveillance, disease investigation, and environmental public health are vital to emergency response efforts.**

The Missouri Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) system analyzes and reports data from 84 hospitals. ESSENCE access has been granted to over 200 users. These users represent DHSS, LPHAs, and participating hospitals.

The ESSENCE system works by placing chief complaints from each emergency department visit into one or more syndromic groups. The system then determines whether the number of visits in that syndromic category was higher than expected for that hospital, county, or zip code. This allows public health officials at the state and local level to become aware of a potential outbreak, bioterrorist attack, or other adverse health event much earlier than would be possible through traditional surveillance methods.

The ESSENCE system can also be used to increase situational awareness by augmenting information about a known health event (e.g., an outbreak, natural disaster, chemical accident) and its consequences. Situational awareness information can be used to assess the extent, impact, or location of an event, and to help public health partners target resources or redirect response efforts.

Whether syndromic surveillance is used for early event detection or situational awareness, its purpose is the same - to provide information to our partners at the state and local level that helps them to prevent, contain, or mitigate the effects of a public health event.

Through BTS, sentinel reporters (such as schools and clinics) provide daily counts of ill persons to DHSS based on syndromes. These counts are compiled daily and analyzed for trends by the PHEDA unit, much as with ESSENCE, to provide alerts to state and local disease control staff.

Enhancing the readiness of environmental health professionals to respond to emergencies was a priority project for DHSS during the year. Staff from the Division of Community and Public Health developed a number of training and resource tools to assist local and state environmental public health specialists. A *Disaster Field Manual for Environmental Health Specialists* was completed and DHSS is in the process of distributing these to all LPHAs. This field manual is intended to assist trained environmental health personnel to respond to a major disaster.

To assure awareness of and knowledge of the content of the field manual, DHSS has developed an on-line course to accompany the roll-out of the disaster manual. Each module in the course is specific to the chapters contained in the field manual. The on-line course was developed jointly with St. Louis University's Heartland Center and is available through their Learning Management System (LMS) at [www.heartlandcenters.com](http://www.heartlandcenters.com).

In addition, an environmental disaster toolkit is also being distributed to all the LPHAs. The toolkit is a compilation of printable environmental health resource and guidance material to be distributed during the emergency to the general public or the media to provide them with accurate and timely information.

Lastly, to assist shelter coordinators and staff during an emergency DCPH staff developed *A Public Health Guide for Emergency Shelters in Missouri for Shelter Coordinators and Staff* to provide planning and operations assistance for shelter operators.



This guide was developed to introduce and outline some of the many aspects of planning for and opening an emergency shelter. It provides a brief overview of public health issues plus the main areas of concern for shelter operations such as food and water, pest control, waste management, and life safety.

Another key area of planning and preparedness coordinated through DCPH is in the area of radiological and nuclear response. DHSS has over 20 personnel trained to respond to radiological incidents. The Callaway and Cooper Nuclear Plants conduct four to six exercises annually participated in by DHSS and other state and local agencies. These exercises simulate an accident at the plant that result in a release of radioactive material to the environment. Protective action recommendations are given to county agencies by DHSS as a means to assure public health and safety during such an emergency.

## Ready in 3

The Ready in 3 emergency preparedness program was developed to educate all Missourians about planning for emergencies and to motivate them to act on that knowledge by preparing their households, businesses, and families.

State and local public health agencies are working with other state agencies, faith-based organizations, schools, emergency responders, employers, seniors and special needs populations, community groups, and the Missouri General Assembly to inform individuals about steps they can take to prepare for an emergency.

A family safety guide, family plan, brochures, fact sheets, videos, posters, presentation materials, and newsletter articles are available for residents, community groups, and businesses. Resources and tools have been created in multiple languages and for specific targeted audiences such as homily messages, weekly bulletin text, and youth group activities for faith-based organizations; lesson plans, bookmarks, activity sheets, and videos for child care facilities and schools; planning templates and videos for adult care facilities; and videos for Missourians who use American Sign Language. All materials are free of charge and are available on the Ready in 3 web site at [www.dhss.mo.gov/Ready\\_in\\_3](http://www.dhss.mo.gov/Ready_in_3).

In addition, various promotional campaigns have been created centered around the Ready in 3 preparedness message such as print advertisements published in English and Spanish, radio and television public service announcements, and movie theater advertisements.

New to the Ready in 3 library of resources for this period is a checklist, web site and three-day diet designed specifically for Missourians on dialysis. A Household Pet Preparedness checklist was also developed for pet owners as they prepare for emergencies. During this period, CERT staff gave Ready in 3 presentations to over 125 organizations including reaching over 1,000 faith-based leaders across the state. In addition, LPHAs and other response partners continue to give presentations and provide Ready in 3 materials to citizens across the state.

DHSS agencies and home care provider associations are working together to develop an insert for the Family Safety Guide that targets the unique needs of the elderly and disabled in emergency preparedness.

**Ready in 3 aims  
to educate all  
Missourians on steps  
they can  
take to  
prepare for  
emergencies of  
all kinds.**

## Pandemic Influenza

DHSS continued widespread preparations for pandemic influenza during the year. Of particular significance were a series of pandemic plan updates and reviews conducted for the federal oversight agencies. CDC reviewed the health-related portions of the state plan, sending out a series of crosswalk spreadsheets to identify specific measures and processes needed in the plan. The area leads for surveillance, laboratory, healthcare, communications, vaccine and antiviral distribution and community mitigation worked to successfully respond to this CDC request in January.

In March 2008, a combined group of core federal cabinet level agencies lead by the departments of Health and Human Services and Homeland Security sent out the “Federal Guidance to Assist States in Improving State-Level Pandemic Influenza Operating Plans”. This scored assessment guidance focused on three main strategic goals: Ensure Continuity of Operations of State Agencies and Continuity of State Government; Protect Citizens; and Sustain/Support 17 Critical Infrastructure and Key Resource Sectors.

DHSS partnered with all state agencies and lead workgroups to prepare the response to extremely detailed and in-depth questions concerning the status of the state’s operational readiness for pandemic influenza. Missouri’s report covered all potential planning areas, from internal continuity planning, to public health and health sector planning, to planning for the maintenance of critical infrastructure, such as transportation and food supplies.

In addition, local and state pandemic planning and preparedness efforts continued across the state through trainings and exercises that tested their plans, including activities by specialized workgroups, such as the Altered Standards of Care Committee.

Outreach activities continued and pandemic influenza preparedness was promoted by the:

- Development and promotion of a pandemic influenza community preparedness toolkit.
- Development of business toolkit and template to supplement the business guide.
- Mailing to 1,900 public and parochial schools, federally qualified health centers (FQHCs) and 200 special needs organizations encouraging them to plan for emergencies of all kinds.
- Distribution of the “Pandemic Flu: The Case for Preparing Now” video, the “Pandemic Influenza Community Preparedness Toolkit”, and “Preparing for an Influenza Pandemic: A Guide to Planning for Business” to LPHAs.
- Articles in various publications such as the *Missouri Family Physician* with a circulation of 1,500 practitioners; *Your Voice*, distributed to 2,000 businesses; and *Adolescent Shorts* newsletter distributed to 6,000 adolescent health care providers, school nurses, school counselors and nurse practitioners.
- Launch of a radio and television ad campaign called “Fifth Guy” that uses humor to highlight the need for people to take simple steps to protect themselves and others from the flu.

During the past two years, pandemic influenza outreach efforts have reached businesses, schools, hospitals, FQHCs, LPHAs, senior centers, legislators, faith-based organizations, adult care facilities, family practice physicians, general public, area agencies on aging, child care providers, media, special needs organizations, adolescent health care providers, school nurses, school counselors, and nurse practitioners. Over 2,000 pandemic influenza business guides and nearly 300,000 community guides have been distributed.

## Department of Mental Health - Office of Disaster Readiness

DHSS is collaborating with the Missouri Department of Mental Health's (DMH) Office of Disaster Readiness to enhance the networking capacity and training of health care professionals and others to recognize, treat, and coordinate care related to the behavioral health consequences of bioterrorism and other public health emergencies. In addition to the trainings, employees participate in exercises and drills that integrate behavioral health components into their hospital preparedness plan and other response plans.

The Office of Disaster Readiness coordinates with federal, state, and voluntary organizations to ensure a coordinated behavioral health response to all-hazards, and to ensure access to the most up-to-date training and research on the behavioral health response to disasters.

The Office of Disaster Readiness develops and administers the Federal Emergency Management Agency (FEMA) Crisis Counseling Program grant when there is a federal disaster declaration in Missouri. A FEMA Crisis Counseling Immediate Services Program Grant was implemented in 2008 to reach victims of the Mississippi River flooding in Lincoln, Pike, Ralls and St. Charles counties. The Office of Disaster Readiness maintains a seat at SEMA's Operations Center and DHSS' DSR to coordinate the behavioral health response in a disaster or terrorism event.

The Office of Disaster Readiness works with DHSS and SEMA on planning efforts such as special needs populations and pandemic influenza. Staff actively participate in the DHSS pandemic influenza planning subcommittees of mental health, special health care needs, and mortuary affairs.

In addition, this office works with DMH's 29 facilities and contracted providers to promote the development of an all-hazard preparedness template with pandemic continuity of operations planning and training.

### Fast Fact

**During 2008,  
more than 1,300 health care workers,  
first responders, emergency management  
officials, school personnel,  
mental health professionals,  
faith-based leaders and volunteers  
received training  
on behavioral health response  
in a disaster.**

## Information Technology Services Division

The Information Technology Services Division (ITSD) provides application development support for the maintenance and enhancements of new and existing emergency response software applications for use at DHSS. Some of these applications include the Strategic National Stockpile Application (SNS), Missouri Health Surveillance Information System (MOHSIS), Bioterrorism Surveillance System (BTS) and the Emergency System for Advanced Registration of Volunteer Healthcare Professionals (ESAR-VHP).

The Strategic National Stockpile (SNS) Application is a web-based application that was designed to track the SNS inventory. DHSS, LPHAs, and participating hospitals use the application to track SNS inventory through the receipt of materiel from CDC; initiating, editing and approving orders; transferring to LPHAs and hospital dispensing sites; and the return of unused inventory to DHSS.

During the past year, the SNS Application has been redesigned to make it easier and more intuitive for use in the field by LPHAs and hospitals. Many edit checks were added for more accurate data collection and tracking. This includes adding a column displaying when inventory supplies are below a predetermined amount. The changes allow faster and easier data entry when time may be of the essence.

MOHSIS is a transactional application used by DHSS and LPHA staff. It provides a centralized and integrated database for the entry, update and retrieval of surveillance information about reportable conditions of interest to public health. MOHSIS provides an efficient system for disease investigation staff to track the progress of cases and provide reports to DHSS and LPHA staff and to CDC.

In the past year, enhancements were made to the program to increase the speed of the application to make it easier and more efficient. In the coming year, the program will be available as a web-based application that can be accessed anywhere via the Internet.

The Bioterrorism Surveillance System (BTS) is a web-based application used for data entry of daily, aggregate syndromic data (syndromic data would precede diagnosis and may signal a sufficient probability of a case or an outbreak to warrant further public health response) from sites such as hospitals and schools. These disease-reporting systems are used to quickly identify an unusual disease or an unusual number of cases of a disease.

The Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) application is an emergency credentialing and identification system to ensure that sufficient numbers and types of qualified emergency response professionals can be identified, assembled and effectively used during major disasters.

In addition to the software application development and support, ITSD works with CERT to ensure that DHSS has a reliable information network and information technology, which is essential to DHSS' ability to conduct emergency preparedness activities.

The Information Technology Services Division is preparing DHSS for Public Health Information Network (PHIN) Preparedness Certification. The PHIN is CDC's vision for advancing fully capable and interoperable information systems in the many organizations that participate in public health. ITSD staff participates on the DHSS PHIN preparedness certification committee and is working to complete the functional self-assessments as the first step towards certification. ITSD staff are also participating on multiple national



workgroups and committees to review PHIN requirements and modify the standards to make them clearer, more concise and simpler to implement and use.

The Geographic Information Systems (GIS) unit within ITSD continues to provide support for emergency preparedness and response. Locating outbreaks, tracking contagions, determining at-risk populations, and assisting with logistics are just a few examples of how GIS has helped emergency response efforts across the state.

The GIS unit partnered with LPHAs to improve local geospatial capabilities for emergency response and public health surveillance. GIS software and global positioning system (GPS) units have been provided to 33 local public health agencies through the Local Emergency and Environmental Public Health Initiative. ITSD staff conducted field data collection training, as well as introductory and advanced GIS courses.

GIS staff is also collaborating with other DHSS staffers to map chemical facilities that house large amounts of chemicals, and identify the areas that a chemical release could impact. GIS is used to identify day cares, nursing homes, hospitals and schools that fall in these areas. This collaborative effort is provided to DHSS staff, LPHA staff, as well as emergency planners, to provide the tools necessary to prepare response plans that adequately handle the intricacies involved with sensitive populations.

The GIS Unit continues to develop new methods for enhancing response and improving efficiency during emergency events. Staff have worked closely with DHSS' Radiological Response Team to incorporate GIS into their nuclear event response planning. The GIS Unit continues to map disease outbreaks as well.

## **Annual Public Health Preparedness Conference**

Training state and local public health employees and health care staff is vital to being prepared and continues to be a priority for DHSS. The department hosted a statewide conference September 17-18, 2007, that brought together 366 emergency response partners from across the state. These individuals included professionals from LPHAs, laboratories, hospitals, mental health, infection control and environmental specialists.

This conference was designed to help assure that we are all aware of the responsibilities of each of the members of the team at all levels - local, state, regional and national - in order to work together to protect the lives and health of Missourians from natural and man-made public health threats.

## Public Health Preparedness and Response UPDATE

The Public Health Preparedness and Response UPDATE highlights the efforts of Missouri's preparedness efforts across the state and is disseminated among public health partners at the local, regional, state and federal levels.

### Fast Fact

**Published quarterly, the Public Health Preparedness and Response UPDATE reaches over 1,000 emergency response partners across the state.**

## Internet Resources

CERT maintains the DHSS Emergency Response and Terrorism and Pandemic Influenza web sites that provide links to comprehensive information on biological, chemical, and radiological terrorism and pandemic influenza, for medical and public health professionals and the general public. During the this period, the Emergency Response and Terrorism web site recorded 164,868 total hits; the Pandemic Influenza web site recorded 62,238.

The program recently released a Strategic National Stockpile (SNS) web site that captures additional tools and resources useful for local communities in developing plans to receive, distribute and dispense SNS assets. Also included on the web site are references for enhancing points of dispensing (PODs) as well as training opportunities.

## Hospital Preparedness Program

To develop and enhance hospital and other health care entities' capacity and capability to respond to terrorism, natural disasters and other public health emergencies, CERT collaborates with key healthcare organizations and associations within Missouri to administer the Assistant Secretary for Preparedness and Response (ASPR) Hospital Preparedness Grant.

Through the ASPR grant, competency-based education has been provided to hospitals and other health care entities by DHSS and through contracts with the Missouri Hospital Association (MHA), St. Louis Area Regional Response System (STARRS), Mid-America Regional Council (MARC), and the Department of Mental Health (DMH). Educational programs include:

- National Incident Management System Train-the-Trainer and for Hospital Executive Leadership;
- Basic and Advanced Disaster Life Support;
- Disasters and Mental Health: A Basic Approach for Health Care Responders, School Personnel, and Pastoral Care; and Faith Based Organizations;
- Weapons of Mass Destruction Training;
- Advanced Burn Life Support;
- EMS System Refresher Training;
- Operations Level Decontamination/HAZMAT Training;
- Communication Equipment;
- Pandemic Influenza Preparedness;
- Mass Fatality Planning;
- Evacuation Planning;
- Planning for Medical Surge: Alternate Care Sites;
- Center for Disaster Preparedness Healthcare Leadership Course;
- Exercise Evaluator Training Program and Certification;
- Train-the-Trainer Equipment Instruction; and
- Psychological First Aid Training.

Through a contract with the Missouri Primary Care Association (MPCA), ASPR funds have provided staff from the federally qualified health centers the opportunity to participate in planning efforts, educational opportunities and exercises. Federally Qualified Health Centers are equipped to offer assistance to LPHAs and hospitals. Their offices may be used as a triage site or an alternative care center, based on the regional plans.

To increase surge capacity, DHSS, in collaboration with MHA, MARC, and STARRS, has provided Missouri hospitals significant funding for equipment and supplies. Hospitals have received emergency blankets, towels, hospital emergency triage response kits, redundant communication equipment, handheld radiation detection meters, class c personal protective equipment, military-style stretchers and stands with decontamination capability, and other decontamination equipment.

Medical surge caches, which include bedding and very basic medical supplies, have been assembled and disseminated to hospitals. The caches increase the capacity for medical surge, alternate care, special needs or mass care shelter for approximately 5,500 individuals. Hospitals and communities were selected based on their ability to manage and store the inventory, willingness to assume responsibility, access to major highways and hazard vulnerability. In addition, oxygen caches were acquired and placed with health and medical partners throughout the state. Antibiotic caches were purchased and are being stored in a pharmaceutical warehouse for health and medical providers.

**Trailers containing critical supplies like cots, blankets, and comfort kits can be moved to any disaster in Missouri.**

*Strengthening Response Capacity in Missouri's Local Communities*

Mobile emergency response trailers have been purchased, equipped and located throughout the state. These trailers are equipped with deployable tools to assist in developing surge capacity. The regional placement of the trailers provides reduced response time in deployment to a mass casualty incident or disaster. Hospitals hosting a trailer have agreed to maintain the trailers for use within their communities or in response to regional or state emergencies.

Six computerized wireless simulation manikins were purchased and provided to the new Russell D. and Mary B. Shelden Clinical Simulation Center affiliated with the University of Missouri - Columbia, School of Medicine. The center will serve as the site for advanced disaster preparedness skills training. The School of Medicine has applied to become a National Disaster Life Foundation Regional Training Center. Specialized disaster-related training programs coordinated through MHA are available to all Missouri health care providers at no cost through grant funds.

The MO-1 Disaster Medical Assistance Team (MO-1 DMAT) is a local, regional, state, and federal resource. Team members include professional and paraprofessional medical personnel (supported by a cadre of logistical and administrative staff) designed to provide emergency medical care during a disaster or other event. Three regional response teams are located in strategic locations around the state: St. Louis, Kansas City, and Springfield/Branson.

MHA, in coordination with the Mid-America Regional Council (MARC) and St. Louis Area Regional Response (STARRS) hosted a Healthcare Leadership course at the Noble Training Center in Anniston, Alabama for 65 Missouri leaders. The training center is the only comprehensive health care training facility in the world. The entire hospital still is functional but is dedicated exclusively to disaster preparedness training. During the week-long training, participants had the opportunity to exercise a catastrophic disaster using all hospital departments and functions. Future trainings will be scheduled.

## **Show-Me Response**

The Department of Health and Senior Services in partnership with Collaborative Fusion, Inc., implemented the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) compliant volunteer management system. The new Show-Me Response program provides a secure web-based platform that is available 24 hours a day, seven days a week to provide for the efficient registration, check of credential, management and activation of both pre-registered and spontaneous volunteers in the event of a natural or man-made disaster. Show-Me Response provides readily available, verifiable up-to-date information regarding a volunteer's identity, license credential verification status, and employment information as well as tools to notify and manage the deployment of volunteers.



## Center for Local Public Health Services

The Center for Local Public Health Services (CLPHS) convenes local public health agencies, state partners, and other stakeholders to address emergency preparedness issues related to the public health volunteer system and public health workforce development in order to protect the health of individuals impacted by disasters.

Ongoing state and local events have underscored the need for volunteers to assist public health with staffing needs. Public health volunteers were needed to assist with sheltering after tornadoes hit southwest Missouri in January 2008. During the 2008 winter ice storms, public health volunteers were needed in northern Missouri to assist with sheltering and to expand medical capacity. When floods hit Missouri in spring and summer 2008, public health volunteers were utilized to assist LPHAs to vaccinate those involved in holding back the floodwaters, as well as those involved in clean-up.

The CLPHS works to offer training opportunities in emergency preparedness and response in conjunction with the St. Louis University Heartland Public Health Education and Training Center (Heartland Center), and has continued to develop web-based continuing education on the Learning Management System (LMS). Two new courses for the Learning Management System, “Emergency Preparedness Including Bioterrorism: An All Hazards Course for Local Boards of Health” and “Orientation to Public Health for Volunteers” have been added, as well as 20 other courses developed by DHSS, for a total of 365 courses currently available. The system is web-based to allow individuals to learn at their own pace. This system eliminates the cost of time away from the worksite and travel expenses. Between August 2007 and August 2008, employees have completed 3,896 courses. Since January 2006, a total of 5,267 courses have been completed.

In partnership with the Heartland Center, ongoing training for 22 new LPHA administrators and staff regarding the LMS was accomplished through four regional trainings this past year. Since January 2006, a total of 292 LPHA staff from 106 counties have been trained.

The 4th Annual Public Health Volunteer Symposium on utilization of volunteers in a public health setting was held in July 2008, with 99 participants attending. Topics included the discussion of rules of engagement for volunteer use under the newly enacted state law RSMo 44.105, liability issues of volunteer utilization, and ways to incorporate volunteers into daily public health activities. Since 2005, a total of 432 participants have attended the annual public health volunteer symposiums.

Beginning in 2007, Public Health Volunteer Mini-initiatives were awarded to support capacity building in workforce development and emergency response plans at the local level through the use of volunteers. Awardees focused on the development of program policies, response plans, training and inclusion of volunteers during emergency response exercises. Six LPHAs participated from August 2006-July 2007 and a total of 19 LPHAs participated between August 2007-July 2008.

An evaluation of the Public Health Volunteer Program was conducted in early 2008 to discover areas for improvement, identify program gaps and gauge awareness of existing program resources.

A Public Health Volunteer Recruitment and Communication Toolkit for Local Public Health Agencies was developed in July 2008. The toolkit contains templates of posters, postcards, flyers, news releases and recruitment letters that can be customized by the LPHAs to assist in volunteer program development.

**The Center for  
Local Public  
Health Services  
acts as a liaison to  
local public health  
agencies for  
communication  
and public health  
workforce  
development.**

Additional training of LPHA administrators and staff was provided through 18 regional public health system meetings. Topics covered included CDC Tetanus and Other Immunization Protocols for Ordering During Emergencies, Utilization of the LPHA Emergency Web Page, Update on Pandemic Flu, Demonstration of the Missouri Emergency Resource Information System (MERIS), Strategic National Stockpile (SNS) Planning/Monitoring Tools, Update to the Chemical Risk and Sensitive Populations Project, and Special Needs Population – Annex X. Additionally, information on House Bill 579, Missouri legislation in 2007 that provides for liability coverage for volunteers as well as allows for volunteer dispensing of medications in a Governor-declared emergency, was presented.

Additional training courses for volunteers have been identified and posted to the DHSS web site under volunteer resources. The volunteer program coordinator co-presented “Tools of the Trade” at the annual public health emergency preparedness conference held in late September 2007. Resources were shared with LPHAs to assist them in the seven steps of volunteer program development.

A tutorial was created for the LPHA emergency web page. This tutorial was targeted to LPHAs and DHSS staff to train them about the features of the web page and how the department will utilize the web page during emergency response activities.

Information related to emergency preparedness topics is also routinely communicated to LPHAs, state agencies including DHSS staff, and community partners via Friday Facts, a weekly e-newsletter.

To increase community members’ awareness, a Speakers’ Bureau on Emergency Response was developed and continues to offer professionals and the general public a clearinghouse of qualified speakers able to address a wide range of emergency preparedness and response topics. There are currently 28 speakers in the Speakers’ Bureau. Between August 2007 and August 2008 there have been 101 requests received for speakers. Since September 2005, a total of 311 request have been received for speakers.

DHSS’ Community Development Services (CDS), housed within the Center for Local Public Health Services, works to connect community coalitions to emergency preparedness activities both at the state and the local levels. These coalitions are valuable grass-roots organizations that strive to improve and protect the health of their communities. One way CDS accomplishes this mission is by actively participating in pandemic influenza planning to develop strategies to bring communities together and prepare how they will respond to protect their citizens during such an event.

## Strategic National Stockpile

The Strategic National Stockpile (SNS) is a national repository of critical medical supplies designed to supplement and resupply state and local public health agencies and hospitals in the event of a national emergency anywhere and at anytime within the United States or its territories. The goal of the SNS program is to provide the rapid delivery of SNS lifesaving pharmaceuticals to any location within 12 hours or less from the federal decision to deploy. The SNS program is managed by the CDC and is carried out in conjunction with state and local communities, which have responsibility for developing their own plans for the receipt and distribution of SNS supplies. DHSS' CERT is responsible for:

- Developing SNS plans at the state and local community levels to efficiently and effectively manage SNS assets;
- Managing the SNS supplies at state warehouses -- Receiving, Staging and Storage (RSS) Sites or Regional Distribution Sites (RDS);
- Training SNS team members to quickly and efficiently receive and distribute supplies to LPHAs, hospitals and other treatment centers; and
- Assuring exercise and training for the local level emergency response plans.

The program receives oversight from a multi-agency SNS Advisory Council. This Council, which is comprised of local, state and federal partners, meets on a quarterly basis to review program objectives; receive information about exercises and new guidance information; and to assist in future directives and information which aids the program in its preparedness and response efforts.

More than 130 SNS team members have received hands-on training and are prepared to operate RSS or RDS sites around-the-clock, if necessary. Annually, Missouri has held full-scale exercises to test the operations of these sites as well as state and local plans for the massive distribution of SNS materiel. Local public health agencies are responsible to have SNS plans for distributing and dispensing the medications to their residents once they receive the SNS assets. During 2008, over 450 federal/state/local partners participated in a statewide, full-scale mass priority prophylaxis exercise to test the state's ability to rapidly dispense medications to the first responders' community in and around St. Louis. An additional tabletop exercise was held in the Kansas City region to test antiviral distribution planning.

### Fast Fact

**DHSS developed a web site specifically for SNS tools and resources, at [www.dhss.mo.gov/StrategicNationalStockpile/index.html](http://www.dhss.mo.gov/StrategicNationalStockpile/index.html)**

DHSS provides guidance for the creation of local and regional response plans as well as training. Training includes hands-on instruction for the Missouri Health Strategic Architectures and Information (MOHSAIC) system, an inventory management system. MOHSAIC is a secure web-based system that allows LPHAs, hospitals and treatment centers to order SNS medications rapidly. Additional training includes workshops addressing mass prophylaxis dispensing; public information and communication and the use of resources and tools, such as Homeland Security Exercise and Evaluation Program (HSEEP) that will enhance local planning efforts.

Exercises and trainings are key components of the continuous quality improvement model of the SNS program. Additionally, the program has recognized the need to develop a pool of trained evaluators statewide to assist in the evaluation component

of the numerous exercises. This cross-training and participation also affords the evaluators the opportunity to observe best practices which can be replicated in their local planning efforts. Because of this significant emphasis at the state and local level, and the requirement to report exercises and trainings using the required HSEEP, CERT is providing additional opportunities for training in HSEEP and exercise evaluation.

In addition to local community partners, SNS operations also require collaboration and coordination of many state and federal agencies. Through the SNS planning continuum, DHSS has strengthened partnerships with the Missouri State Highway Patrol, Missouri Department of Corrections, State Emergency Management Agency, Missouri State Water Patrol, Missouri Department of Conservation, Office of Administration, Missouri Department of Transportation, Missouri Department of Natural Resources, Division of Fire Safety, Missouri Department of Mental Health and the Federal Bureau of Investigation.

### Fast Fact

**Based on evaluations of planning efforts and full-scale exercises, Missouri received a score of 96 out of 100 from the CDC for its SNS preparedness efforts.**

As part of the SNS program, selected local jurisdictions have been chosen by CDC to participate in the Cities Readiness Initiative (CRI) Program. These jurisdictions must focus planning efforts to achieve their capacity to deliver medications and medical supplies to their entire population within 48 hours. In that regard, CRI cities must plan for and collaborate on multiple levels to provide lifesaving medications early enough within the event to make a significant health impact. This task requires planning for various dispensing modalities to achieve this goal and reduce significant morbidity and mortality.

Missouri currently has two CRI cities, St. Louis and Kansas City, which encompass 19 local jurisdictions within Missouri boundaries. The states of Illinois and Kansas also participate in these two CRIs respectively.

CHEMPACK is also a component of the SNS program. Missouri must be prepared to mount a swift and effective response to acts of terrorism involving nerve agents, as well as situations involving accidental releases of organophosphates, to minimize potential loss of life. Working together with CDC and the U.S. Department of Homeland Security, Missouri has identified community partners who act as custodial sites for pre-positioned nerve agent/organophosphate antidotes and associated pharmaceuticals that will be readily available for use when local supplies become depleted. DHSS plans to provide additional training for the custodial sites as well as outreach to the emergency response communities and medical community regarding this program.

## Planning

CERT and the LPHAs continue to update their public health emergency response plans, including plans for the Strategic National Stockpile and pandemic influenza. Planning occurs through workgroups and committees made up of representatives from the public and private sectors, as well as subject matter experts, with the goal to produce functional and useful plans, protocols and guides for a public health emergency.

DHSS supports the local public health agencies, their planning staff and community partners by providing direction, coordination, and technical assistance on the development,



evaluation and modification of their local, multi-county, or regional plans.

The local public health agencies are continuing their work to test and implement these plans, as well as continuing with their local and regional community partnership activities. These partnerships include private businesses, hospitals, emergency management, law enforcement, fire service, emergency medical services, and other public service agencies. Through these efforts, the local public health agencies can greatly improve partnerships and integration of these plans in the community.

## **Special Needs Population Planning**

In August 2008, a Special Needs Population Liaison was hired to address the special needs population planning, preparedness and response to support local communities and healthcare providers with this critical issue.

Annex X of the State Emergency Operations Plan, which provides the state guidelines for individuals with special needs during an emergency event, was finalized and distributed to partners in March 2008. DHSS is the lead agency for special needs preparedness and worked with 36 supporting agencies through the Special Needs Population Steering Committee to finalize Annex X. The Special Needs Population was defined as persons requiring personal/medical assistance (elderly, persons with disabilities, homebound, homeless, displaced children, morbidly obese, domestic violence victims, non-English speaking and tourists).

A Special Needs Sheltering Standard Operating Guide (SOG) for Local and County Emergency Management was also prepared and distributed for use as a local template in July 2008. The SOG is a tool offered to local governmental agencies that promotes flexibility and creative solutions consistent with a community's strengths and resources in setting up a special needs shelter. In addition, Special Needs Shelter Manager and Nurse Checklists were provided for local use.

Specialized supply caches for special needs shelters were purchased by CERT and will be distributed as regional assets with a focus on rural communities in late 2008. Two caches will be located in each region ready for deployment as communities need them.

Home care providers have been targeted as a community asset that needs to become more engaged with special needs planning, preparedness and response. The Special Needs Population Liaison and the Division of Senior and Disability Services Emergency Coordinator have been educating home care providers on their critical role in special needs emergency management, and also encouraging them to assist with educating their consumers on individual preparedness.

The Special Needs Population Steering Committee continues to meet on a quarterly basis to identify barriers that prohibit understanding or the ability to act/react during an emergency, identify interventions, identify resources and identify accountability. Also, a new Special Needs Recovery Task Force (SNERET) is being developed and will serve as a subcommittee to the steering committee and will provide a mechanism to address disaster-related unmet needs for disaster survivors who have significant special needs in terms of personal and/or medical limitations as defined in the State Emergency Operations Plan's Annex X - Special Needs.

# Emergency Response Public Information Toolkit

An Emergency Response Public Information Toolkit, which includes news release templates, key messages, fact sheets, CDs, and reference materials, is routinely updated and provided to all local public health agencies.

## Exercises and Trainings

Trainings and exercises help responders practice, build partnerships, and aid in finding problems in planning before a real situation occurs. CERT worked to design, conduct, organize, and evaluate exercises across the state. These are some examples of exercises and trainings held from August 2007 to August 2008:

- LPHA public health preparedness contract staff attended a public health emergency preparedness workshop in Jefferson City on April 25-26, 2007 to increase collaboration and skills necessary to respond to a public health emergency and to address goals, objectives and deliverables for each grant year.
- Over 150 DHSS staff involved in preparedness issues attended Incident Command System (ICS) trainings.
- 92 DSR/SEOC team members were trained in February 2008 on their specific duties during a public health emergency.
- 104 school health nurses attended regional trainings to learn more about how to recognize emergencies, apply creative problem solving, and define roles in emergency response and self-evaluation.
- An avian influenza rapid response training exercise addressed initial responses to an avian influenza virus and its containment in human and animal populations. The discussion-based exercise was held in Southeast Missouri to include all Region E counties. The scenario looked at the potential dangers of migratory birds carrying what could become a pandemic influenza virus. Participating LPHAs looked at their ability to identify the threat and act quickly to prevent the spread of avian viruses into human populations.
- A Strategic National Stockpile Cities Readiness Initiative Full-Scale Exercise simulated an anthrax attack in St. Louis. The state operated a Receiving Staging and Storage (RSS) site to provide supplies to multiple St. Louis area LPHAs and hospitals. The RSS was prepared to simulate distributing massive amounts of life-saving antibiotics for the general public and hospitals in the area. The exercise brought the fully activated State Emergency Operations Center (SEOC) and the DHSS' DSR into the exercise with local participants. The exercise also tested HAM radio to further strengthen alternate communications options in an emergency.
- An unannounced call-down exercise was conducted in February 2008 to test responses to detection of pneumonic plague in collectors. A tabletop exercise held in May 2008 included the U.S. Department of Homeland Security, FBI, LPHAs, state and local response agencies and hospitals. The exercise challenged plans regarding responses following the detection of a biological release by terrorists.

- Continuity of Operations, Continuity of Government (COOP/COG) pandemic influenza exercises were conducted this past year for seven state agencies. DHSS provided assistance to all state agencies for designing and conducting these exercises, and also tested its own COOP/COG plans in a 2008 exercise.
- DHSS provided consultation and participated in designing a four-state pandemic influenza exercise that included Missouri, Iowa, Kansas and Nebraska. The exercise tested state, local and federal agencies in the region that were linked together through video conferencing technology.
- An antiviral pandemic exercise examined the distribution of state and federal antiviral stockpiles, tested surveillance plans and the role of epidemiologists in combating the spread of the illness and strategies to determine and address areas of need during a pandemic.
- A 90-minute MOHSAIC Inventory System Training introduces the concepts of using the SNS software, called MOHSAIC Inventory System, to order pharmaceuticals, medical supplies and equipment from the SNS. The training was held in nine regions of the state with 342 individuals attending from LPHAs, hospitals and federal qualified health centers.
- A Continuity of Operations training - eLearning course was developed to make DHSS personnel aware of the department's continuity of operations plan and understand their role when a plan is implemented. To date, 1,563 employees have taken the course.
- A DSR training – eLearning course has been developed. This course will provide information for duty officers on what each station will do during activation of the DSR. As turnover occurs in the DSR, this eLearning course will enable training of new duty officers in an accelerated fashion. This training will also be provided to team members of the DSR who report when it is activated so they can be familiar with each of the DSR workstation's roles.
- During 2008, 127 state and local public health staff and hospital personnel participated in DHSS' risk communications/media trainings. These included a basic class, advanced classes and spokespersons training, as well as one specifically for the DHSS and regional public information officers. To date, more than 1,125 persons have attended these seminars.

A contract monitoring process was developed to work with LPHAs to assure completion of improvement actions based on lessons learned from exercises. The improvement action steps are a part of the Homeland Security Exercise and Evaluation Program (HSEEP) that provides a systematic way for exercise participants to continually improve.

## **Public Health Preparedness Advisory Committee**

The Missouri Public Health Preparedness Advisory Committee (PHPAC) functions as the senior advisory committee (SAC) for the CDC Public Health Emergency Preparedness and ASPR Hospital Preparedness grants.

In addition, the advisory committee formed a Local Public Health Preparedness Ad Hoc Committee to more closely review local public health issues. The Ad Hoc Committee members include DHSS staff and LPHA administrators from metropolitan and rural areas across the state. The facilitated discussion during the July 2008 planning session evaluated the current state and local system, reviewed target capabilities and looked at current gaps. The group continues to meet to work on better defining the roles and responsibilities at the state and local levels and setting future goals.

The PHPAC will meet quarterly and focus on the administration of both grants, policy decisions, and an integrated system of emergency preparedness and infrastructure at the state and local levels. The PHPAC's role is to provide guidance for the funding formula and assist in setting priorities for the grant periods. This committee also provides oversight throughout the grant period, and formulates public health responses to current needs or pending issues and makes recommendations.

## **Local Public Health Agencies**

During this period, CERT provided contracts to 114 LPHAs for the purpose of emergency planning and pandemic influenza preparedness. Contractors were awarded funds to cover salaries, travel expenses, and equipment for the following positions: planners, epidemiology specialists, public information officers; and volunteer coordinators. These contractors were responsible for the following essential services:

- 1 Develop a functional local emergency plan, conduct exercises, and update plans;
- 1 Coordinate local surveillance activities;
- 1 Coordinate and train local volunteers for public health emergency response and exercises; and
- 1 Preparing pandemic influenza plans.

Local public health plans are updated on an annual basis and numerous exercises are held to test these plans. Key partners, such as law enforcement, hospitals, fire, schools, businesses, faith-based organizations and other emergency management organizations have come to the table together to discuss roles and responsibilities during an emergency event.



# Funding Sources

## **Centers for Disease Control and Prevention (CDC)**

### **Public Health Emergency Preparedness Grant**

August 31, 2007 - August 9, 2008: \$11,423,481 (*11-months, 1 week grant period*)

August 9, 2008 - August 10, 2009: \$11,728,377 (*12-months grant period*)

## **Centers for Disease Control and Prevention (CDC)**

### **Pandemic Influenza Grant**

August 2007 - August 2008: \$3,329,500

August 2008 - August 2009: \$0

## **Centers for Disease Control and Prevention (CDC)**

### **Cities Readiness Initiative (CRI) Grant**

August 31, 2007 - August 9, 2008: \$1,300,711 (*11-months, 1 week grant period*)

August 9, 2008 - August 10, 2009: \$1,300,711 (*12-months grant period*)

## **Assistant Secretary for Preparedness and Response (ASPR)**

### **Hospital Preparedness Grant**

August 31, 2007 - August 9, 2008: \$7,906,932

August 9, 2008 - August 10, 2009: \$7,580,577

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